

1 **WHAT IS CLAIMED IS:**

2 1. A skate wheel having skew-mounted and self-powered illuminating
3 devices, comprising:

4 two mutually coupled anchors, each having a recessed portion on one side
5 facing each other, such that when the two anchors are joined together the two
6 recessed portions are combined to produce a chamber in between the two
7 anchors;

8 a ring-shaped rotor being placed in the above chamber defined by the two
9 coupled anchors, wherein the rotor is formed by a ring-shaped induction coil and
10 two metal plates, wherein the induction coil is formed by a wire wound around a
11 circular core, and the two metal plates are joined together holding the induction
12 coil in between, where a first end of the induction coil connected to the coupled
13 metal plates; whereby the rotor is able to revolve synchronously with revolution
14 of the coupled anchors;

15 multiple illuminating devices being installed with a skew angle on the rotor,
16 wherein each illuminating device has a first terminal and a second terminal, the
17 first terminal is connected to the two metal plates, and the second terminal is
18 connected to a second end of the induction coil;

19 a stator being fitted in the rotor, but not in physical contact with the rotor;
20 an axle extending through the two coupled anchors and secured with the
21 stator;

22 a protective covering formed around the circumference of the two anchors;
23 wherein

24 multiple pairs of one of the projected portions and one of the sunken

1 portions are formed on the rim of the two anchors, where each pair of the
2 projected portion and the sunken portion, when the two anchors are mutually
3 coupled, creates a volume on the rim of the rotor that is inclined at an angle that
4 corresponds with the skew angle of each corresponding illuminating device.

5 2. The skate wheel as claimed in claim 1, wherein each illuminating device
6 is inserted into the volume with a skew angle of 45 degrees in relation to the rotor
7 positioned in an upright direction.

8 3. The skate wheel as claimed in claim 2, wherein each illuminating device
9 is a light emitting diode (LED) having two terminals respectively connected to
10 the two metal plates of the rotor.

11 4. The skate wheel as claimed in claim 1, wherein two bearing sleeves are
12 fitted into respective notches on the outer wall of the two anchors to receive the
13 axle.

14 5. The skate wheel as claimed in claim 1, wherein the two metal plates are
15 joined together by welding.

16 6. The skate wheel as claimed in claim 2, wherein the two metal plates are
17 joined together by welding.

18 7. The skate wheel as claimed in claim 3, wherein the two metal plates are
19 joined together by welding.

20 8. The skate wheel as claimed in claim 4, wherein the two metal plates are
21 joined together by welding.